REMARKS

[0002] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 1, 3-9, 11-22, and 46-54 are currently pending
- No claims are canceled herein
- No claims are withdrawn herein
- Claims 9, 47, 50 and 53 are amended herein
- No new claims are added herein

[0003] Claims 9, 47, 50 and 53 are amended to overcome the §101 rejection.

[0004] References herein to paragraph numbers of the specification of the instant Application are from the Publication of the U.S. Patent Application 10/676,499.

Claims 47 and 54 Comply With § 112 1st Paragraph

[0005] Claims 47 and 54 stand rejected under 35 U.S.C. § 112, ¶ 1, as allegedly failing to comply with the written description requirement. Applicant respectfully traverses this rejection.

[0006] In its rejection, the Office states:

> "The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 47 and 54 recite "adjusting 'consumption-rate' of the incoming stream" which was not described in the specification."
>
> (Office Action, pages 2-3).

[0007] Applicant respectfully disagrees with the Office's assertion that "adjusting consumption-rate of the incoming stream" is not described in the specification in manner that complies with the first paragraph of § 112. Paragraph [0009] of the specification states:

> [0009] Watermark detection is often performed in real-time even on small electronic components. Such a "real-time" detector is also often called a "dynamic detector." Generally, this means **that the detector is attempting to detect a watermark in intangible goods as the goods are being consumed (e.g., played, presented, stored, and such).** For example, if the intangible good is an audio signal, the detector attempts detection while the audio signal is being played. If, for example, the intangible good is a video signal, the detector attempts detection while the video signal is being played.

[0008] As shown by the emphasized portion of paragraph [0009] above, the term "played" is given as an example of the term "being consumed." Furthermore, paragraphs [0079]-[0081] of the specification state:

> [0079] Interference By Changing Incoming Rate
>
> [0080] The **circumvention module 160 may produce the interference** (of block 214) **by changing the incoming rate for the stream. For example, if incoming stream is an audio clip, it may change the "play-rate" of a multimedia stream**.
>
> [0081] The play-rate may be changed with a rate converter. Audio sample rate conversion and video frame rate conversion is a well known technique in the industry. The use of a variable speed rate converter would allow the module 160 to vary the rate of the audio or video going in to the detector to confuse it.

[0009] As shown by the emphasized portion of paragraph [0080] above, the "play-rate" is directed towards "the incoming stream." Since the term "played" has been shown in the specification, (at least at paragraph [0009]), to be exemplary of the term "being consumed", it is logical to restate the term "play-rate" as "consumption-rate." As

also shown, (at least at paragraph [0080]), the "play-rate" may be "changed." "Changing" and "adjusting" are known to be synonymous. In addition, the term "adjusting" and "adjusting 'play-rate" is also used in the original claims 3, 11, and 19.

[0010] Therefore, claims 47 and 54 are in compliance with § 112 1st paragraph because their recitation of "adjusting 'consumption-rate' of the incoming stream" is fully supported by the specification. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

Claims 17-22, 48, and 51 Comply With § 112 2nd Paragraph

[0011] Claims 17-22, 48 and 51 stand rejected under 35 U.S.C. § 112, ¶ 2, as allegedly being indefinite. Applicant respectfully traverses this rejection.

[0012] In its rejection, the Office states, "Claims 17-22, 48 and 51 recite a system claim without any structural component and consist solely of language that could be implemented with only software. Claims 17-22, 48 and 51 do not provide any functional interrelationship to any software and hardware structural components to provide certain function that is processed by a computer." (Office Action, page 3).

[0013] As the Office knows, 35 U.S.C.. § 112, ¶ 2 states that the claims must "particularly point out and distinctly claim the subject matter which the applicant regards as his invention." For the reader's convenience, the independent claims in question here are reproduced below (as least in part and with emphasis added):

> Claim 17: the system comprising:
> a memory-location determiner ("watermark-detector detector") configured to **determine where a dynamic embedded-signal detection program module ("watermark detector") receives a subject input stream** for the watermark detector to perform detection thereon to determine if the stream has an embedded-signal therein;

an intervention component configured to intervene with clear reception of the subject input stream by the watermark detector, thereby hindering watermark detection by the watermark detector.

Claim 48: the system comprising:

a memory-location determiner ("watermark-detector detector") configured to **determine where, in a memory, an embedded-signal detection program module ("detector") receives a subject input stream** for the detector to perform detection thereon to determine if the subject input stream has an embedded-signal therein and further configured to detect and observe the detector **in a processor-readable memory of a computer to determine its location in such memory;**

an intervention component configured to intervene with clear reception of the subject input stream, thereby hindering watermark detection by the detector, wherein the intervening comprises adjusting an incoming rate for the input stream.

Claim 51: the system comprising:

a memory-location determiner ("watermark-detector detector") configured to **determine a location where, in a memory, an embedded-signal detection program module ("detector") receives a subject incoming stream** for the detector to perform detection thereon to determine if the incoming stream has an embedded-signal therein;

an intervention component configured to intervene with clear reception of the subject incoming stream, thereby hindering detection by the detector, wherein the intervention component is further configured to modify the reception by introducing a countersignal into the incoming stream **at the location in memory determined to be where the subject incoming stream is being received by the detector.**

[0014] The Office states, "Claims 17-22, 48 and 51 recite a system claim without any structural component and consists solely of language that could be implemented with only software." (Office Action, page 3). However, Applicant respectfully submits that independent claims 17 (along with its dependent claims 18-22), 48 and 51 recite system claims that operate on a structural component, namely a memory.

[0015] For example, claim 51 recites, "a memory-location determiner ('watermark-detector detector') configured to determine a location where, in a memory, an

embedded-signal detection program module ('detector') receives a subject incoming stream for the detector to perform detection thereon to determine if the incoming stream has an embedded-signal therein ." A determination operates on a "location where, in a memory". That is a physical location in a physical memory. As further evidence of the physical and structural nature of the claimed "memory," the specification discusses memory at least at paragraph [0119] which states in part :

> [0119] The system memory 606 includes a computer readable media in the form of volatile memory, such as random access memory (RAM) 610, and/or non-volatile memory, such as read only memory (ROM) 612.

[0016] In addition, the Office states, "Claims 17-22, 48 and 51 do not provide any functional interrelationship to any software and hardware structural components to provide certain function that is processed by a computer." (Office Action, page 3). Applicant respectfully submits that independent claims 17 (along with its dependent claims 18-22), 48 and 51 act upon a physical and structural memory. Therefore, the claims provide functional interrelationship between any potential software and hardware structural components (namely, the memory) to provide certain function that is processed by a computer.

[0017] Therefore, claims 17-22, 48 and 51 are in compliance with § 112 2nd paragraph because claims 17-22, 48 and 51 recite system claims with structural components. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

Claims 9, 11-15, 47, 50 and 53 Recite Statutory Subject Matter Under § 101

[0018] Claims 9, 11-15, 47, 50 and 53 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicant respectfully traverses this rejection.

[0019] It its rejection, the Office states, "method claims 9, 47, 50 and 53 neither transform the claimed subject matter to a different state or thing nor they [sic] are tied to any computer or apparatus therefore are rejected under 35 U.S.C. § 101." (Office Action, pages 3-4). Applicant respectfully disagrees.

[0020] Applicant respectfully submits that independent claims 9, 47, 50 and 53 are all tied to a particular machine, thereby constituting statutory subject matter under 35 U.S.C. § 101. More particularly, the language of claim 9 is tied to a "location in a processor-readable memory of a computer configured to receive a subject input stream for the watermark." Also, the language of claim 47 is tied to "a processor-readable memory of a computer configured to dynamically detect watermarks in an input stream" where a "dynamic embedded-signal detection program module ('dynamic detector')" is located. Moreover, the language of claims 50 and 53 are tied to a "location in a processor-readable memory of a computer configured to dynamically detect an embedded-signal in an input stream."

[0021] Furthermore, support for the processor-readable memory of a computer is found in the specification at least at paragraph [0119], "the system memory 606 includes computer readable media in the form of volatile memory, such as random access memory (RAM) 610 and/or non-volatile memory, such as read only memory (ROM) 612."

[0022] Therefore, claims 9, 47, 50, 53 and dependent claims 11-15 satisfy the "particular machine" test put forth by the Patent Office (*See* Pages 4-6, 10 and 15 of USPTO Memorandum titled "Effective Today: New Interim Patent Subject Matter Eligibility Examination Instructions" on August 24, 2009 for example). Accordingly, Applicant respectfully requests that the rejection of these claims be withdrawn.

Cited Documents

[0023] The following documents have been applied to reject one or more claims of the Application:

- **Felten:** Felten et al., "Reading Between the Lines: Lessons from the SDMI Challenge" USENIX, August 13-17, 2001
- **Cox:** Cox et al., "Some general methods for tampering with watermarks" IEEE, 1998, pages 1-15
- **Rhoads**: Rhoads et al., U.S. Patent No. 6,522,769
- **Tobias***:* Tobias, WO 01/24530

Claims 1, 4-9, 12-18, 20-22 and 48-52 Are Non-Obvious Over Felten in view of Cox and Rhoads

[0024] Claims 1, 4-9, 12-18, 20-22 and 48-52 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Felten, Cox and Rhoads. Applicant respectfully traverses the rejection.

Independent Claim 1

[0025] Applicant submits that independent claim 1 is not obvious in view of the combination of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim (with emphasis added):

> **observing and determining a location in a processor-readable memory of a computer, where a dynamic embedded-signal detection program module ("watermark detector") receives a subject input stream** for the watermark detector to perform detection thereon to determine if the stream has an embedded-signal therein

[0026] Claim 1 recites in part, "observing and determining a location in a processor-readable memory of a computer, where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 5). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0027] Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3).

[0028] It appears the Office is equating "observing and determining a location," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0029] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed location is "in a processor-readable memory of a computer." More particularly, the claimed location is "where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a processor readable memory of a computer where the watermark is being detected.

[0030] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where the "watermark detector receives a subject input stream for the watermark detector to perform detection thereon to determine if the stream has an embedded-signal therein."

[0031] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0032] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads

looking for "the location at which different watermark data begins and ends." (*See* Rhoads col. 16 lines 2-3).

[0033] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0034] Because the claimed "observing and determining a location," of a particular memory location is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "observing and determining a location in a processor-readable memory of a computer, where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream," as claim 1 recites in part.

[0035] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "observing and determining a location in a processor-readable memory of a computer, where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream," as claimed.

[0036] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Dependent Claims 4-8

[0037] Claims 4-8 ultimately depend from independent claim 1. As discussed above, claim 1 is allowable over the cited documents. Therefore, claims 4-8 are also allowable

over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Independent Claim 9

[0038] Applicant submits that independent claim 9 is not obvious in view of the combination of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim, as amended, (with emphasis added):

> **observing and determining a location in a processor-readable memory of a** computer configured to receive a subject input stream for the watermark, the location being where a dynamic embedded-signal detection program module **("watermark detector") receives a subject input stream** for the watermark to perform detection thereon to determine if the stream has an embedded-signal therein

[0039] Claim 9 recites in part, "observing and determining a location in a processor-readable memory of a computer configured to receive a subject input stream for the watermark, the location being where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream." The Office relies upon Rhoads to teach this feature and, specifically, Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 5) Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0040] Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3).

[0041] It appears the Office is equating "observing and determining a location," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0042] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed location is "in a processor-readable memory of a computer." More particularly, the claimed location is "where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a processor readable memory of a computer where the watermark is being detected.

[0043] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where the "watermark detector receives a subject input stream for the watermark detector to perform detection thereon to determine if the stream has an embedded-signal therein."

[0044] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-

dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0045] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (*See* Rhoads col. 16 lines 2-3).

[0046] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0047] Because the claimed "observing and determining a location," of a particular memory location is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "observing and determining a location in a processor-readable memory of a computer...where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream," as claim 9 recites in part.

[0048] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "observing and determining a location in a processor-readable memory of a computer configured to receive a subject input stream for the watermark, the location being where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream," as claimed.

[0049] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Dependent Claims 12-16

[0050] Claims 12-16 ultimately depend from independent claim 9. As discussed above, claim 9 is allowable over the cited documents. Therefore, claims 12-16 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Independent Claim 17

[0051] Applicant submits that independent claim 17 is not obvious in view of the combination of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim (with emphasis added):

> **a memory-location determiner ("watermark-detector detector") configured to determine where a dynamic embedded-signal detection program module ("watermark detector") receives a subject input stream for the watermark detector to perform detection** thereon **to determine if the stream has an embedded-signal** therein;

[0052] Claim 17 recites in part, "a memory-location determiner ('watermark-detector detector') configured to determine where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream for the watermark detector to perform detection…to determine if the stream has an embedded-signal." The Office relies upon Rhoads to teach this feature and, specifically, the Office

cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 5). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0053] Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3)

[0054] It appears the Office is equating "a memory-location determiner," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0055] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). The claimed "memory-location determiner" is "where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location, "where a dynamic embedded-signal detection program ('watermark detector') receives a subject input stream."

[0056] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where the "watermark detector receives a subject input

stream for the watermark detector to perform detection thereon to determine if the stream has an embedded-signal therein."

[0057] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0058] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (*See* Rhoads col. 16 lines 2-3).

[0059] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0060] Because the claimed "memory-location determiner" is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "a memory-location determiner ('watermark-detector detector') configured to determine where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream," as claim 17 recites in part.

[0061] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "a memory-location determiner ('watermark-detector detector') configured to determine where a dynamic embedded-signal detection program module ('watermark detector') receives a subject input stream for the watermark detector to perform detection…to determine if the stream has an embedded-signal," as claimed.

[0062] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Dependent Claims 18 and 20-22

[0063] Claims 18 and 20-22 ultimately depend from independent claim 17. As discussed above, claim 17 is allowable over the cited documents. Therefore, claims 18 and 20-22 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Independent Claim 48

[0064] Applicant submits that independent claim 48 is not obvious in view of the combination of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim (with emphasis added):

- **a memory-location determiner ("watermark-detector detector") configured to determine where, in a memory, an embedded-signal detection program module ("detector") receives a subject input stream for the detector to perform detection** thereon to determine if the subject input stream has an embedded-signal therein and further

configured to detect and observe the detector in a processor-readable memory of a computer to determine its location in such memory

- **an intervention component configured to intervene with clear reception of the subject input stream,** thereby **hindering watermark detection by the detector,** wherein **the intervening comprises adjusting an incoming rate for the input stream**

[0065] Claim 48 recites in part, "an intervention component configured to intervene with clear reception of the subject input stream…hindering watermark detection by the detector…the intervening comprises adjusting an incoming rate for the input stream." The Office relies upon Cox to teach this feature and, specifically, the Office cites Cox, 5. Signal Transformation and 6. Intentional Attack as teaching this feature. (Office Action, pages 8-9).

[0066] Cox describes tampering with watermarks and to what extent a watermark can be resistant to tampering. Cox also describes a variety of possible attacks. (Cox, title and abstract). Cox describes, "a number of common signal transformations that a watermark should survive, e.g., noise." (Cox, 5. Signal Transformation). Cox also describes, "a series of attacks that can be mounted against an unrestricted-key watermark." (Cox, 6. Intentional Attack).

[0067] It appears the Office is relying upon Cox's teaching about different types of signal transformations and intentional attacks that might be made on a watermark (*see* Cox 6. Intentional Attack) with the specific language recited by the claim about intervening with watermark detection itself rather than attacking the watermark. Cox fails to list any attack or transformation of the watermark that teaches or suggests the claimed "intervene[ing] with clear reception of the subject input stream …hindering watermark detection by the detector…the intervening comprises adjusting an incoming rate for the input stream."

[0068] Cox describes a number of common signal transformations that a watermark should survive e.g. affine transformations, compression/re-compression, and noise." (Cox, 5 Signal Transformations). Cox further describes 6. Intentional Attacks such as 6.1 Exploiting the Presence of a Watermark Detector Device, 6.2 Attacks Based on the Presence of a Watermark Inserter, 6.3 Attacks by Statistical Averaging, and 6.4 Attacks on the Copy Control Mechanism. The "transformations" and "attacks" as listed and described by Cox do not include the "intervening compris[ing] adjusting an incoming rate for the input stream," as claimed. Nowhere does Cox disclose, teach or suggest "adjusting an incoming rate for the input stream." Instead, Cox describes pixel shifting, adding random noise of a similar amplitude, exploiting the watermark detector by accessing information about whether a content contains a watermark or not, attacking the watermark inserter, estimating the watermark and subtracting this from the marked image, and circumventing the copy control mechanism.

[0069] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0070] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Cox's watermarks. The counterfeiter may crumple the bill repeatedly and severely mark the bill with colored markers in attempt to

make it difficult for the teller to see the watermarked portrait when the teller holds the bill up to the light to see the watermarked portrait through the bill.

[0071] However, the counterfeiter's attempt to obscure the watermarked portrait of the bill is not the same as intervening with teller in her teller cage as she attempts to examine the hundred-dollar bill in the light. Intervening with the watermarked portrait in the hundred-dollar bill is not the same as intervening with the bank teller as she goes about her job.

[0072] In addition, claim 48 recites in part, "a memory-location determiner ('watermark-detector detector') configured to determine where, in a memory, an embedded-signal detection program module ('detector') receives a subject input stream for the detector to perform detection." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 9). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0073] Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3).

[0074] It appears the Office is equating "a memory-location determiner," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0075] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). The claimed "memory-location determiner" is "where, in a memory, an embedded-signal detection program module ('detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location, "where, in a memory, an embedded-signal detection program ('detector') receives a subject input stream."

[0076] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where the "detector receives a subject input stream for the detector to perform detection thereon to determine if the subject input stream has an embedded-signal therein."

[0077] The contrast might be illustrated by the same story about the counterfeiter discussed above. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0078] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads

looking for "the location at which different watermark data begins and ends." (*See* Rhoads col. 16 lines 2-3).

[0079] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0080] Because the claimed "memory-location determiner" is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "a memory-location determiner ('watermark-detector detector') configured to determine where, in a memory, an embedded-signal detection program module ('detector') receives a subject input stream," as claim 48 recites in part.

[0081] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "an intervention component configured to intervene with clear reception of the subject input stream…hindering watermark detection by the detector…the intervening comprises adjusting an incoming rate for the input stream," as claimed. Additionally, none of the cited references (alone or in combination) disclose, teach or suggest, "a memory-location determiner ('watermark-detector detector') configured to determine where, in a memory, an embedded-signal detection program module ('detector') receives a subject input stream for the detector to perform detection," as claimed.

[0082] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Independent Claim 49

[0083] Applicant submits that independent claim 49 is not obvious in view of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim (with emphasis added):

> **determining where, in a memory, a dynamic watermark detection program module ("watermark detector") receives a subject input stream for the watermark detector to perform watermark detection** thereon to determine if the subject input stream has an embedded-signal therein

[0084] Claim 49 recites in part, "determining where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream for the watermark detector to perform watermark detection." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 10). Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0085] It appears the Office is equating "determining where, in a memory," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0086] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed location is "in a memory." More particularly, the claimed location is "where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a memory where the watermark is being detected.

[0087] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where "a dynamic watermark detection program module ('watermark detector') receives a subject input stream for the watermark detector to perform detection thereon to determine if the subject input stream has an embedded-signal therein."

[0088] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0089] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up

to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (*See* Rhoads col. 16 lines 2-3).

[0090] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0091] Because the claimed "determining where," of a particular memory location is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "determining where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream," as claim 49 recites in part.

[0092] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "determining where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream for the watermark detector to perform watermark detection," as claimed.

[0093] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Independent Claim 50

[0094] Applicant submits that independent claim 50 is not obvious in view of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of

Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim, as amended, (with emphasis added):

> **determining a location in a processor-readable memory of a computer** configured to dynamically detect an embedded-signal in an input stream**, the location being where a dynamic embedded-signal detection program module ("dynamic detector") receives a subject incoming stream for the dynamic detector to perform detection** thereon to determine if the subject incoming stream has an embedded-signal therein

[0095] Claim 50 recites in part, "determining a location in a processor-readable memory of a computer…the location being where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream for the dynamic detector to perform detection." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 10). Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0096] It appears the Office is equating "determining a location," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0097] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed

location is "in a processor-readable memory of a computer." More particularly, the claimed location is "where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a processor readable memory of a computer where the watermark is being detected.

[0098] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where the "dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream for the dynamic detector to perform detection thereon to determine if the subject incoming stream has an embedded-signal therein."

[0099] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0100] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (*See* Rhoads col. 16 lines 2-3).

[0101] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0102] Because the claimed "determining a location in a processor-readable memory" is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "determining a location in a processor-readable memory of a computer…the location being where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream," as claim 50 recites in part.

[0103] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "determining a location in a processor-readable memory of a computer…the location being where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream for the dynamic detector to perform detection," as claimed.

[0104] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Independent Claim 51

[0105] Applicant submits that independent claim 51 is not obvious in view of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim (with emphasis added):

a memory-location determiner ("watermark-detector detector") configured to determine a location where, in a memory, an embedded-signal detection program module ("detector") receives a subject incoming stream for the detector to perform detection thereon to determine if the incoming stream has an embedded-signal therein

[0106] Claim 51 recites in part, "a memory-location determiner ('watermark-detector detector') configured to determine a location where, in a memory, an embedded-signal detection program module ('detector') receives a subject incoming stream." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 10). Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0107] It appears the Office is equating "a memory-location determiner," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0108] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). The claimed "memory-location determiner" is "where, in a memory, an embedded-signal detection program module ('detector') receives a subject incoming stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location, "where,

in a memory, an embedded-signal detection program module ('detector') receives a subject incoming stream."

[0109] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where the "detector receives a subject incoming stream for the detector to perform detection thereon to determine if the incoming stream has an embedded-signal therein."

[0110] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0111] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (See Rhoads col. 16 lines 2-3).

[0112] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0113] Because the claimed "memory-location determiner" is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "a memory-location determiner ('watermark-detector detector') configured to determine a location where, in a memory, an embedded-signal detection program module ('detector') receives a subject input stream," as claim 51 recites in part.

[0114] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "a memory-location determiner ('watermark-detector detector') configured to determine a location where, in a memory, an embedded-signal detection program module ('detector') receives a subject incoming stream," as claimed.

[0115] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Independent Claim 52

[0116] Applicant submits that independent claim 52 is not obvious in view of the combination of Felten, Cox and Rhoads. Applicant submits that the combination of Felten, Cox and Rhoads does not teach or suggest at least the following features of this claim (with emphasis added):

- **determining where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream** for the watermark detector to perform watermark detection thereon to determine if the subject input stream has an embedded-signal therein
- **maintaining the intervening while the subject input stream is being played**

[0117] Claim 52 recites in part, "determining where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input

stream." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 8). Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0118] It appears the Office is equating "determining where, in a memory," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0119] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed location is "in a memory." More particularly, the claimed location is "where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a memory where the watermark is being detected.

[0120] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where "a dynamic watermark detection program module

('watermark detector') receives a subject input stream for the watermark detector to perform watermark detection thereon to determine if the subject input stream has an embedded-signal therein."

[0121] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0122] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (See Rhoads col. 16 lines 2-3).

[0123] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0124] Because the claimed "determining where," of a particular memory location is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "determining where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream," as claim 52 recites in part.

[0125] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "determining where, in a memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream," as claimed.

[0126] Consequently, the combination of Felten, Cox and Rhoads does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Claims 3, 11, 19, 46-47 and 53-54 Are Non-Obvious Over Felten in view of Cox, Rhoads and Tobias

[0127] Claims 3, 11, 19, 46-47, and 53-54 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Felten, Cox, Rhoads and Tobias. Applicant respectfully traverses the rejection.

Dependent Claim 3

[0128] Claim 3 ultimately depends from independent claim 1. As discussed above, claim 1 is not anticipated by the cited document, and is therefore allowable over the cited documents. Therefore, dependent claim 3 is also allowable over the cited document of record for at least its dependency on an allowable base claim. Additionally, this claim may also be allowable for the additional features that it recites.

Dependent Claim 11

[0129] Claim 11 ultimately depends from independent claim 9. As discussed above, claim 9 is not anticipated by the cited document, and is therefore allowable over the cited documents. Therefore, dependent claim 11 is also allowable over the cited

document of record for at least its dependency on an allowable base claim. Additionally, this claim may also be allowable for the additional features that it recites.

Dependent Claim 19

[0130] Claim 19 ultimately depends from independent claim 17. As discussed above, claim 17 is not anticipated by the cited document, and is therefore allowable over the cited documents. Therefore, dependent claim 19 is also allowable over the cited document of record for at least its dependency on an allowable base claim. Additionally, this claim may also be allowable for the additional features that it recites.

Independent Claim 46

[0131] Applicant submits that independent claim 46 is not obvious in view of the combination of Felten, Cox, Rhoads and Tobias. Applicant submits that the combination of Felten, Cox, Rhoads and Tobias does not teach or suggest at least the following features of this claim (with emphasis added):

> **determining where, in a processor-readable memory, a dynamic watermark detection program module ("watermark detector") receives a subject input stream** for the watermark detector to perform watermark detection thereon to determine if the subject input stream has a watermark therein

[0132] Claim 46 recites in part, "determining where, in a processor-readable memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream," and "observing the watermark detector in the processor-readable memory of a computer to determine its location in such memory." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 12). Rhoads describes,

"Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0133] It appears the Office is equating "determining where, in a processor-readable memory," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0134] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed location is "in a processor-readable memory." More particularly, the claimed location is "where, in a processor-readable memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a memory where the watermark is being detected.

[0135] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where "a dynamic watermark detection program module ('watermark detector') receives a subject input stream for the watermark detector to

perform watermark detection thereon to determine if the subject input stream has a watermark therein."

[0136] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0137] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (See Rhoads col. 16 lines 2-3).

[0138] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0139] Because the claimed "determining where," of a particular processor-readable memory location is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "determining where, in a processor-readable memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream," as claim 46 recites in part.

[0140] None of the cited references (alone or in combination) disclose, teach or suggest, "determining where, in a processor-readable memory, a dynamic watermark detection program module ('watermark detector') receives a subject input stream," as claimed.

[0141] Consequently, the combination of Felten, Cox, Rhoads and Tobias does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Independent Claim 47

[0142] Applicant submits that independent claim 47 is not obvious in view of the combination of Felten, Cox, Rhoads and Tobias. Applicant submits that the combination of Felten, Cox, Rhoads and Tobias does not teach or suggest at least the following features of this claim, as amended, (with emphasis added):

> **based upon the observing, determining a location in the processor-readable memory, the location being where the dynamic detector receives a subject incoming stream for the dynamic detector to perform embedded-signal detection** thereon to determine if the subject incoming stream has an embedded-signal therein

[0143] Claim 47 recites in part, "based upon the observing, determining a location in the processor-readable memory, the location being where the dynamic detector receives a subject incoming stream for the dynamic detector to perform embedded-signal detection." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 14). Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different

watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0144] It appears the Office is equating "determining a location," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0145] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed location is "in a processor-readable memory of a computer." More particularly, the claimed location is "where the dynamic detector receives a subject incoming stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a processor readable memory of a computer where the dynamic detector receives a subject incoming stream.

[0146] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is, "where the dynamic detector receives a subject incoming stream for the dynamic detector to perform detection thereon to determine if the subject incoming stream has an embedded-signal therein."

[0147] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of

Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0148] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (See Rhoads col. 16 lines 2-3).

[0149] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0150] Because the claimed "determining a location in a processor-readable memory" is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "determining a location in the processor-readable memory, the location being where the dynamic detector receives a subject incoming stream," as claim 47 recites in part.

[0151] None of the cited references (alone or in combination) disclose, teach or suggest, "based upon the observing, determining a location in the processor-readable memory, the location being where the dynamic detector receives a subject incoming stream for the dynamic detector to perform embedded-signal detection," as claimed.

[0152] Consequently, the combination of Felten, Cox, Rhoads, and Tobias does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Independent Claim 53

[0153] Applicant submits that independent claim 53 is not obvious in view of the combination of Felten, Cox, Rhoads and Tobias. Applicant submits that the combination of Felten, Cox, Rhoads and Tobias does not teach or suggest at least the following features of this claim, as amended, (with emphasis added):

> **determining a location in a processor-readable memory of a computer** configured to dynamically detect an embedded-signal in an input stream, the location being where **a dynamic embedded-signal detection program module ("dynamic detector") receives a subject incoming stream for the dynamic detector to perform detection** thereon to determine if the incoming stream has an embedded-signal therein

[0154] Claim 53 recites in part, "determining a location in a processor-readable memory of a computer…the location being where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream for the dynamic detector to perform detection." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 12). Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0155] It appears the Office is equating "determining a location," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0156] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). Unlike Rhoads, the claimed location is "in a processor-readable memory of a computer." More particularly, the claimed location is "where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location in a processor readable memory of a computer where the watermark is being detected.

[0157] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is, "where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream for the dynamic detector to perform detection thereon to determine if the subject incoming stream has an embedded-signal therein."

[0158] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-

dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0159] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (See Rhoads col. 16 lines 2-3).

[0160] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0161] Because the claimed "determining a location in a processor-readable memory" is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "determining a location in a processor-readable memory of a computer…the location being where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream," as claim 53 recites in part.

[0162] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "determining a location in a processor-readable memory of a computer…the location being where a dynamic embedded-signal detection program module ('dynamic detector') receives a subject incoming stream for the dynamic detector to perform detection," as claimed.

[0163] Consequently, the combination of Felten, Cox, Rhoads and Tobias does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Independent Claim 54

[0164] Applicant submits that independent claim 54 is not obvious in view of the combination of Felten, Cox, Rhoads and Tobias. Applicant submits that the combination of Felten, Cox, Rhoads and Tobias does not teach or suggest at least the following features of this claim (with emphasis added):

> • **a memory-location determiner** ("watermark-detector detector") configured to detect and observe a dynamic watermark detection program module ("watermark detector") in the processor-readable memory of a computer to **detect and determine the location of the watermark detector in such memory, the watermark-detector detector being further configured to detect and determine where, in the processor-readable memory, the watermark detector receives a subject input stream for the watermark detector to perform watermark detection** thereon to determine if the subject input stream has a watermark therein
> • **an intervention component configured to intervene with clear reception of the subject incoming stream by the watermark detector, thereby hindering detection by the watermark detector,** the intervention component being further configured to intervene by one or more intervening actions, the intervening actions being selected from a group consisting of:
>
> **adjusting play-rate of the incoming stream;**
> **adjusting "consumption-rate" of the incoming stream;**
> **introducing a countersignal into the incoming stream;**
> **introducing noise into the incoming stream; and**
> **the intervention component being further configured to maintain intervention while the subject input stream is being consumed by the watermark detector**

[0165] Claim 54 recites in part, "an intervention component configured to intervene with clear reception of the subject incoming stream by the watermark detector, thereby hindering detection by the watermark detector." The Office relies upon Cox to teach this

feature and, specifically, the Office cites Cox, 5. Signal Transformation and 6. Intentional Attack as teaching this feature. (Office Action, page 13).

[0166] Cox describes tampering with watermarks and to what extent a watermark can be resistant to tampering. Cox also describes a variety of possible attacks. (Cox, title and abstract). Cox describes, "a number of common signal transformations that a watermark should survive, e.g., noise." (Cox, 5. Signal Transformation). Cox also describes, "a series of attacks that can be mounted against an unrestricted-key watermark." (Cox, 6. Intentional Attack).

[0167] It appears the Office is relying upon Cox's teaching about different types of signal transformations and intentional attacks that might be made on a watermark (see Cox 6. Intentional Attack) with the specific language recited by the claim about intervening with watermark detection itself rather than attacking the watermark. Cox fails to list any attack or transformation of the watermark that teaches or suggests the claimed "intervene[ing] with clear reception of the subject incoming stream ...hindering watermark detection by the detector."

[0168] Cox describes a number of common signal transformations that a watermark should survive e.g. affine transformations, compression/re-compression, and noise." (Cox, 5 Signal Transformations). Cox further describes 6. Intentional Attacks such as 6.1 Exploiting the Presence of a Watermark Detector Device, 6.2 Attacks Based on the Presence of a Watermark Inserter, 6.3 Attacks by Statistical Averaging, and 6.4 Attacks on the Copy Control Mechanism. The "transformations" and "attacks" as listed and described by Cox do not include the "the intervening actions being selected from a group consisting of: adjusting play-rate of the incoming stream; adjusting 'consumption-

rate' of the incoming stream; introducing a countersignal into the incoming stream; introducing noise into the incoming stream." Instead, Cox describes pixel shifting, adding random noise of a similar amplitude, exploiting the watermark detector by accessing information about whether a content contains a watermark or not, attacking the watermark inserter, estimating the watermark and subtracting this from the marked image, and circumventing the copy control mechanism.

[0169] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0170] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Cox's watermarks. The counterfeiter may crumple the bill repeatedly and severely mark the bill with colored markers in attempt to make it difficult for the teller to see the watermarked portrait when the teller holds the bill up to the light to see the watermarked portrait through the bill.

[0171] However, the counterfeiter's attempt to obscure the watermarked portrait of the bill is not the same as intervening with teller in her teller cage as she attempts to examine the hundred-dollar bill in the light. Intervening with the watermarked portrait in the hundred-dollar bill is not the same as intervening with the bank teller as she goes about her job.

[0172] In Addition, Claim 54 recites in part, "a memory-location determiner ('watermark-detector detector') configured to...detect and determine the location of the watermark detector in such memory, the watermark-detector detector being further configured to detect and determine where, in the processor-readable memory, the watermark detector receives a subject input stream for the watermark detector to perform watermark detection." The Office relies upon Rhoads to teach this feature and, specifically, the Office cites Rhoads, col. 15, line 59-col. 16, line 5 as teaching this feature. (Office Action, page 14). Rhoads describes, "Another control on the UI controls the advance and rewind of the media, permitting the user to determine the location at which different watermark data begins and ends." (Rhoads, col. 15, line 67-col. 16, line 3). Rhoads' watermark detector is designed to decode or interpret a watermark embedded in a signal of a given media type. (Rhoads, abstract).

[0173] It appears the Office is equating "a memory-location determiner," as claimed, with the "determine the location" of Rhoads col. 16, line 2. However, the recited claim language and Rhoads differ because of the locations are different and what is at those locations differ as well.

[0174] Rhoads' locations are "different watermark fields that are being embedded in a work." (Rhoads, col. 15, lines 64-65). Rhoads' "work" is a signal of a given media type, such as audio, video or still images. (Rhoads, abstract). The claimed "memory-location determiner...detect[s] and determine[s] where, in the processor-readable memory, the watermark detector receives a subject input stream." Rhoads "location" is referring to the location where the actual watermark is embedded, and not the location,

"where, in the processor-readable memory, the watermark detector receives a subject input stream."

[0175] Not only is Rhoads looking in a different type of location, Rhoads is looking for something different from what is recited in this claim. Rhoads is looking for "the location at which different watermark data begins and ends." (Rhoads col. 16 lines 2-3). In contrast, the claimed location is where the "watermark detector receives a subject input stream for the watermark detector to perform watermark detection thereon to determine if the subject stream has a watermark therein."

[0176] The contrast might be illustrated by a story about a counterfeiter attempting to pass a counterfeit hundred-dollar bill to a bank teller. The watermark portrait of Benjamin Franklin should be physically located within the hundred-dollar bill that the counterfeiter passes to the bank teller. However, the bank teller holding the hundred-dollar bill up to the light to check for the watermark portrait of Benjamin Franklin is also physically located inside a teller cage at a bank.

[0177] Using this illustrative story, the watermark portrait of Benjamin Franklin in the hundred-dollar bill is analogous to the Rhoads' watermark. The teller holding the bill up to the light to see the watermarked portrait through the bill is analogues to Rhoads looking for "the location at which different watermark data begins and ends." (See Rhoads col. 16 lines 2-3).

[0178] However, the analogous location for the claim language is the teller cage where the teller is standing while she examines the hundred-dollar bill in the light. The location of the watermarked portrait in the hundred-dollar bill is not the same as the location of the bank teller in the bank.

[0179] Because the claimed "memory-location determiner" is not the same as Rhoads' "determine the location" of a watermark, Rhoads does not disclose, teach or suggest, "a memory-location determiner ('watermark-detector detector') configured to… detect and determine the location of the watermark detector in such memory...where, in the processor-readable memory, the watermark detector receives a subject input stream for the watermark detector to perform watermark detection," as claim 54 recites in part.

[0180] Furthermore, none of the cited references (alone or in combination) disclose, teach or suggest, "detect and determine the location of the watermark detector in such memory, the watermark-detector detector being further configured to detect and determine where, in the processor-readable memory, the watermark detector receives a subject input stream for the watermark detector to perform watermark detection," as claimed. Additionally, none of the cited references (alone or in combination) disclose, teach or suggest, "an intervention component configured to intervene with clear reception of the subject incoming stream by the watermark detector, thereby hindering detection by the watermark detector," as claimed.

[0181] Consequently, the combination of Felten, Cox, Rhoads and Tobias does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Expectation that the Next Action will not be Final

[0182] Applicant submits that all pending claims are in condition for allowance. If the Office feels otherwise and believes that another action on the merits is necessary, then Applicant expects such an action would be Non-Final.

[0183] According to 37 CFR § 1.113 and MPEP 706.07, the "examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal." "The invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied." In accordance with 37 CFR § 1.113 and MPEP 706.07(a), Applicant respectfully submits that finality would be premature for the next action for the following reasons:

- The Applicant took no action (e.g., amendment or filing of an IDS with a fee) herein that necessitates that the Office perform a new search or introduces a new ground of rejection;
- This Office Action failed to address specific claimed aspects that the Applicant has previously indicated as differing from the cited art.

No Action Necessitating New Grounds for Rejection or New Search

[0184] Herein, Applicant does not and has not amended any claims. Consequently, one or more claims presented herein have already been examined in the Office Action. Furthermore, Applicant explains herein why these already-examined claims differ from the cited art of record. Therefore, in accordance with 37 CFR § 1.113 and MPEP 706.07(a), finality for the next action would be premature.

Failure to Address Aspects of Claims Previously Identified as Distinguishing

[0185] Applicant submits that the Office has not yet addressed specific claim language that the Applicant submits distinguishes the claims from the cited references (including those newly cited references). It is not that the Office disagreed about whether specific claim language distinguishes the claims from the cited references. Rather, it appears that the Office has not addressed whether specific claim language distinguishes the claims from the cited references.

[0186] Examples of such specific claim language referenced by the Applicant, but never addressed by the Office, may be found at the following locations in Applicant's prior response that is dated 11/18/2009:

Independent Claim 52:

- maintaining the intervening while the subject input stream is being played

Independent Claim 53:

- maintaining the intervening while the incoming stream is being presented

Independent Claim 54:

- intervention while the subject input stream is being consumed by the watermark detector.

[0187] This list is not intended to be exhaustive. Rather, it is intended to illustrate examples of distinguishing claim language discussed in the Applicant's prior response, but not addressed by the examiner in this Action and in its prior Action.

Applicant's Right to Adequately Respond

[0188] With few exceptions, the Office provides little to no explanation as to how the components of the cited reference correspond to the actual claim language. Furthermore, the Office provides little or no explanation as to how the operation of components of the cited reference corresponds to that of the actual claim language.

[0189] Since the Office has provided little or no reasoning for its rejections, Applicant can do little more than gainsay. Applicant is forced to make assumptions and guesses as to the Office's specific reasoning. Therefore, Applicant submits that it has been denied its right to adequately and effectively respond to the Office's rejections.

[0190] In In re Lee, 61 USPQ2d 1430 (CA FC 2002), the Federal Circuit explained the following on page 1433:

> The Administrative Procedure Act, which governs the proceedings of administrative agencies [such as the Patent and Trademark Office] and related judicial review, establishes a scheme of "reasoned decisionmaking." Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational. Allentown Mack Sales and Service, Inc. v. National Labor Relations Bd., 522 U.S. 359, 374 (1998) (citation omitted).
>
> This standard requires that the agency not only have reached a sound decision, but have *articulated the reasons for that decision*. The reviewing court is thus enabled to perform meaningful review within the strictures of the APA, for the court will have a basis on which to determine "whether the decision was based on the relevant factors and whether there has been a clear error of judgment." Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 416 (1971). [emphasis added]

[0191] Applicant submits that the Office has not articulated the reasons for its decision-making here. Furthermore, according to the reasons and facts given above and to 37 CFR § 1.113 and MPEP 706.07, Applicant respectfully submits that no clear issues has been developed between the applicant and the examiner for each pending

claim so that such issues would be ready for appeal if the next action is made final. Accordingly, Applicant respectfully requests that the next action—if not a Notice of Allowance—be Non-Final.

Conclusion

[0192] For at least the foregoing reasons, all pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application.

[0193] If any issues remain that would prevent allowance of this application, Applicant requests that the Examiner contact the undersigned representative before issuing a subsequent Action.

Respectfully Submitted,

Lee & Hayes, PLLC
Representative for Applicant

/kaseychristie40559/ Dated: 03/31/2010

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